

Evaluating the Feasibility of ChatGPT in Healthcare: An Analysis of Multiple Clinical and Research Scenarios

Year: 2023 | Citations: 907 | Authors: M. Cascella, J. Montomoli, Valentina Bellini, E. Bignami

Abstract

This paper aims to highlight the potential applications and limits of a large language model (LLM) in healthcare. ChatGPT is a recently developed LLM that was trained on a massive dataset of text for dialogue with users. Although AI-based language models like ChatGPT have demonstrated impressive capabilities, it is uncertain how well they will perform in real-world scenarios, particularly in fields such as medicine where high-level and complex thinking is necessary. Furthermore, while the use of ChatGPT in writing scientific articles and other scientific outputs may have potential benefits, important ethical concerns must also be addressed. Consequently, we investigated the feasibility of ChatGPT in clinical and research scenarios: (1) support of the clinical practice, (2) scientific production, (3) misuse in medicine and research, and (4) reasoning about public health topics. Results indicated that it is important to recognize and promote education on the appropriate use and potential pitfalls of AI-based LLMs in medicine.